Data from the Commercial Fishery for Arctic Charr, *Salvelinus alpinus* (Linnaeus), in the Cambridge Bay and Rankin Inlet Areas, Northwest Territories, 1981-82

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April 1983

DATA FROM THE COMMERCIAL FISHERY FOR ARCTIC CHARR, *Salvelinus alpinus* (LINNAEUS), IN THE CAMBRIDGE BAY AND RANKIN INLET AREAS, NORTHWEST TERRITORIES, 1981-82

by

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ABSTRACT

Carder, G.W. 1983. Data from the commercial fishery for Arctic charr, Salvelinus alpinus (Linnaeus), in the Cambridge Bay and Rankin Inlet areas, Northwest Territories, 1981-82. Can. Data Rep. Fish. Aquat. Sci. 391: v + 24 p.

Biological samples from commercially caught Arctic charr were collected at the processing plants in Cambridge Bay and Rankin Inlet during 1981 and 1982. These anadromous Arctic charr were caught at the Ekalluk, Paliryuak, Halovik, Lauchlan, Ellice, Perry and Jayco rivers in the Cambridge Bay area and the Rankin Inlet area. Production figures and age, length and dressed weight data are presented.

Key words: catch composition; catch statistics; commercial fishing; exploitation; fishery management; monitoring.

RESUME

Carder, G.W. 1983. Data from the commercial fishery for Arctic charr, Salvelinus alpinus (Linnaeus), in the Cambridge Bay and Rankin Inlet areas, Northwest Territories, 1981-82. Can. Data Rep. Fish. Aquat. Sci. 391: v + 24 p.

Au cours des années 1981 et 1982, on a effectué un échantillonnage biologique des ombles chevaliers livrés aux usines de traitement de Cambridge Bay et de Rankin Inlet. Ces ombles anadromes provenaient des prises commerciales tirées des rivières Ekalluk, Paliryuak, Halovik, Lauchlan, Ellice, Perry et Jayco, dans la région de Cambridge Bay et de Rankin Inlet. Les données portent sur la production, ainsi que sur l'âge, la longueur et le poids paré des poissons.

Mots-clés: composition des prises; données sur la capture; pêche commerciale; exploitation; gestion des pêches; contrôle.

INTRODUCTION

The Department of Fisheries and Oceans (DFO) has monitored the commercial fishery at Cambridge Bay, Northwest Territories since 1971 (Kristofferson and Carder 1980; Carder 1981) and Rankin Inlet, Northwest Territories since 1972 (Carder and Peet 1983). Information collected from biological samples taken has been used to assess the status of the catchable portion of various exploited anadromous Arctic charr stocks. Data obtained from 1981 and 1982 are presented in this report. Quota and production figures from various fishing areas in the Cambridge Bay and Rankin Inlet areas are presented as well.

MATERIALS AND METHODS

The Fisheries

The early history of the Cambridge Bay commercial fishery is described by Barlishen and Webber (1973) and Rankin Inlet by Carder and Peet (1983). Recent data and a description of the Cambridge Bay area can be found in Kristofferson and Carder (1980) and Carder (1981).

In 1981 and 1982 data were obtained on Arctic charr taken from various rivers during the Cambridge Bay commercial fishery (Fig. 1). Biological samples were obtained from the Lauchlan, Halovik, Paliryuak and Jayco rivers during the downstream migration (July) and at the Lauchlan, Ekalluk, Ellice, Perry and Jayco rivers during the upstream migration (mid-August to early September). The Perry River was sampled in 1981 only, since no commercial fishing occurred there during 1982.

In 1981 and 1982 samples were obtained from the Rankin Inlet commercial fishery (Fig. 2). Data from 1981 are presented in Carder and Peet (1983). During 1982 samples were taken in the immediate vicinity of the community of Rankin Inlet. Because of insufficient manpower no data were collected from other areas fished, namely, Baker Foreland and Ferguson River.

Arctic charr were caught primarily by gill net with mesh sizes varing from 139 mm to 159 mm stretched measure. As in 1980 Jayco River was fished using an experimental fish wier (saputit) (Carder 1981).

Sampling and Data Analysis

Sampling methods followed Kristofferson and Carder (1980) and Carder and Peet (1983).

ACKNOWLEDGMENTS

The author wishes to thank the commercial fishermen of the Cambridge Bay and Rankin Inlet areas, and the staff of the Ikaluktutiak Eskimo Co-operative, Cambridge Bay and the Issatik processing plant, Rankin Inlet for their assistance and co-operation.

Summer field assistance was provided by P.J. Jenkins at Cambridge Bay, 1981 and G. Pryznyk and staff of DFO, Rankin Inlet, 1982.

A.H. Kristofferson provided scientific advice. Drafting was done by graphic services (DFO). Word processing and typing services were done by L. Fletcher and S. Ahlgren, (DFO) Winnipeg. As well, the author wishes to thank the DFO staff of Yellowknife and Hay River for their help. R.W. Moshenko reviewed an earlier draft of the report. A.H. Kristofferson reviewed the final draft.

REFERENCES

BARLISHEN, W.J., and T.N. WEBBER. 1973. A history of the development of commercial fishing in the Cambridge Bay area of the Northwest Territories. Unpub. report for the Federal-Territorial Task Force Report on Fisheries Development in the Northwest Territories. 37 p.

CARDER, G.W. 1981. Data from the commercial fishery for Arctic charr, Salvelinus alpinus (Linnaeus), in the Cambridge Bay Area, Northwest Territories 1979-80. Can. Data Rep. Fish. Aquat. Sci. 284: v + 22 p.

CARDER, G.W., and R.F. PEET. 1983. Data from the commercial fishery for Arctic char, Salvelinus alpinus (Linnaeus), in the district of Keewatin, Northwest Territories, 1973-81. Can. Data Rep. Fish. Aquat. Sci. 357: vii + 65 p.

KRISTOFFERSON, A.H., and G.W. CARDER. 1980. Data from the commercial fishery for Arctic char, Salvelinus alpinus (Linnaeus), in the Cambridge Bay area, Northwest Territories, 1971-78. Can. Data Rep. Fish. Aquat. Sci. 184: v + 25 p.

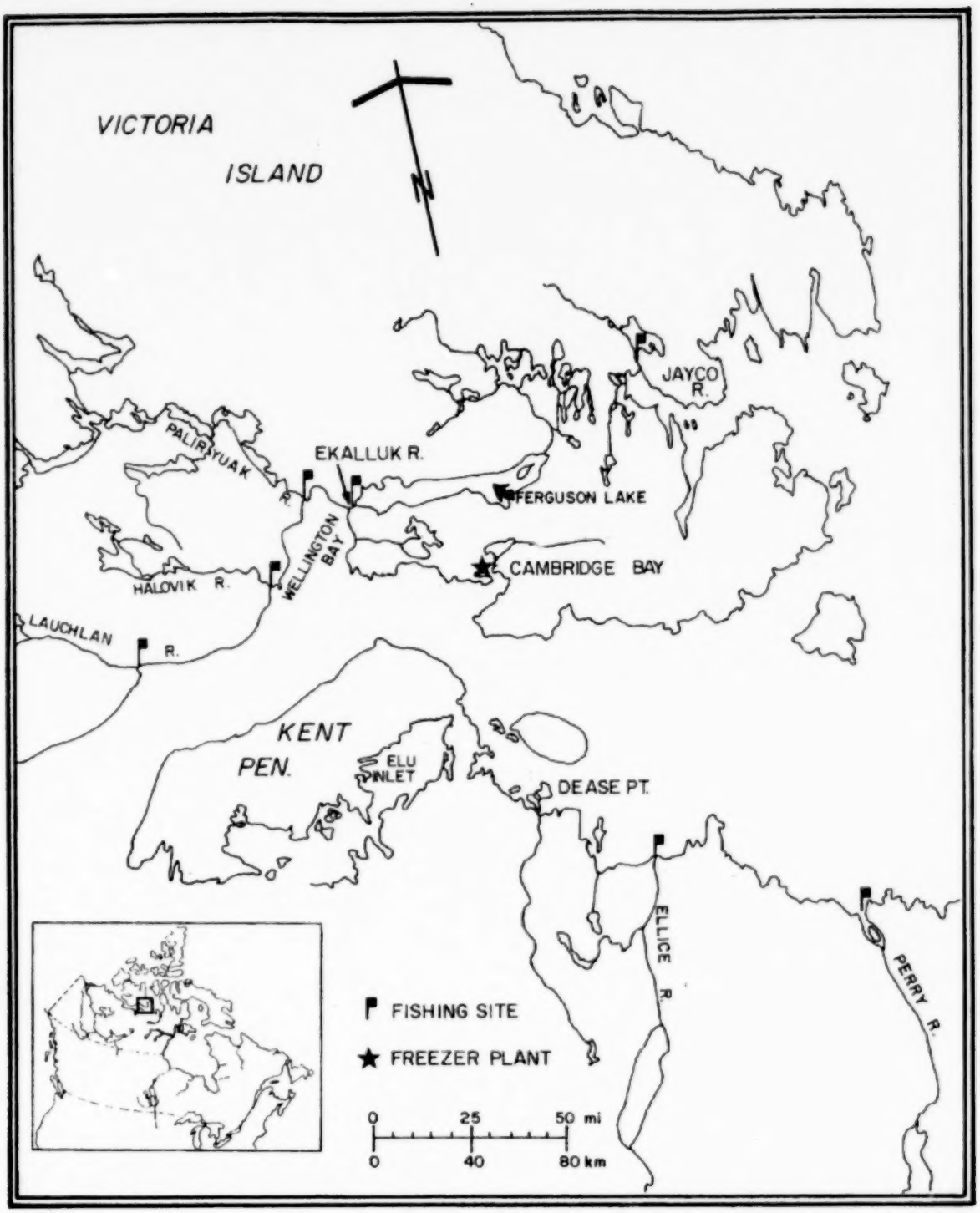

Fig. 1. Map of the Cambridge Bay area showing locations of commercial fishing sites.

Fig. 2. Map of the Rankin Inlet area showing locations of commercial fishing sites.

Table 1. Annual production of anadromous Arctic charr by fishery in the Cambridge Bay and Rankin Inlet areas during 1981 and 1982.

River System	Quota	Production (kg round weight[1])	
	1981 and 1982	1981	1982
Cambridge Bay Area			
Ekalluk River	14 500 (11 600 dr.[2])	14 283 (11 426 dr.)	14 234 (11 387 dr.)
Halovik River (30 Mile)	6 800 (5 400 dr.)	7 009 (5 607 dr.)	6 848 (5 478 dr.)
Paliryuak River (Surrey)	9 100 (7 200 dr.)	8 638 (6 910 dr.)	9 045 (7 236 dr.)
Lauchlan River (Byron Bay)	9 100 (7 200 dr.)	8 724 (6 979 dr.)	8 918 (7 134 dr.)
Ellice River	9 100 (7 200 dr.)	5 744 (4 595 dr.)	8 864 (7 091 dr.)
Perry River	6 800 (5 400 dr.)	2 836 (2 269 dr.)	-
Jayco River	13 600 (10 900 dr.)	13 320 (10 656 dr.)	5 711 (4 569 dr.)
Rankin Inlet Area			
Ferguson River	13 600	18 380 (14 704 dr.)	7 149 (5 719 dr.)
Mistake Bay	2 300	-	370 (296 dr.)
Wilson River	6 800	4 571 (3 657 dr.)	6 903 (5 522 dr.)
Whale Cove	2 300	part of Wilson R. production	510 (408 dr.)
Pistol Bay	2 300	-	9 (7.2 dr.)
Corbett Inlet	4 500	-	-
Rankin Inlet	11 400	15 574 (12 459 dr.)	14 464[3] (12 577 dr.)
Baker Foreland	2 300	3 475 (2 780 dr.)	3 000[3] (2 609 dr.)

[1]Round weight calculated using a dressed weight to round weight conversion factor of 1.25 (includes estimate of culls).

[2]Dressed weight (viscera and gills removed).

[3]Round weight calculated using a dressed weight to round weight conversion factor of 1.15 (does not include estimate of culls).

Table 2. Age composition of Arctic charr taken by the commercial fishery at Ekalluk River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	5	5	627	67.4	3060	961
12	18	17	626	47.4	2947	687
13	34	31	655	56.4	3394	971
14	24	22	651	44.8	3333	759
15	14	13	662	38.3	3443	731
16	9	8	712	39.1	4172	926
17	4	4	717	46.6	4475	987
18	1	1	749	-	3450	-
TOTAL	109					
MEAN			657	54.3	3402	899
MEAN AGE	13.7					

Table 3. Length composition of Arctic charr taken by the commercial fishery at Ekalluk River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	5	3	541	2150	343
550	21	13	583	2326	189
600	41	26	628	2901	234
650	49	31	673	3489	414
700	37	23	721	4441	486
750	6	4	759	5250	335
800	1	1	839	5950	-
TOTAL	160				
MEAN			661	3445	904

Table 4. Age composition of Arctic charr taken by the commercial fishery at Ekalluk River,1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	7	4	633	44.9	2679	691
11	9	6	639	32.8	2689	446
12	24	15	637	32.3	2758	499
13	30	19	652	35.8	2800	469
14	44	28	670	47.8	3098	721
15	26	16	666	50.4	3087	818
16	10	6	674	37.2	3080	701
17	7	4	687	49.2	3271	683
18	2	1	731	55.2	4300	1131
20	1	1	676	-	250	-
TOTAL	160					
MEAN			660	44.9	2952	710
MEAN AGE	13.7					

Table 5. Length composition of Arctic charr taken by the commercial fishery at Ekalluk River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	13	6	581	2004	228
600	74	33	623	2495	248
650	79	36	671	3023	461
700	49	22	718	3736	497
750	6	3	765	4800	682
850	1	0	863	7300	-
TOTAL	222				
MEAN			664	3012	773

Table 6. Age composition of Arctic charr taken by the commercial fishery at Halovik River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	3	3	561	31.3	1617	225
12	8	7	634	65.9	2369	863
13	21	18	646	70.0	2662	849
14	41	34	655	49.6	2768	742
15	16	13	672	55.2	2953	682
16	17	14	684	59.8	3001	626
17	8	7	681	50.2	3050	761
18	2	2	733	61.5	3700	1061
19	2	2	698	23.3	3100	354
20	2	2	727	50.9	3525	813
TOTAL	120					
MEAN			661	60.4	2804	775
MEAN AGE	14.5					

Table 7. Length composition of Arctic charr taken by the commercial fishery at Halovik River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	1	1	487	1050	-
500	8	5	531	1406	371
550	14	8	581	1746	192
600	32	19	625	2319	281
650	58	35	673	2936	357
700	42	25	720	3591	371
750	9	5	763	3867	566
800	1	1	806	3700	-
TOTAL	165				
MEAN			665	2852	776

Table 8. Age composition of Arctic charr taken by the commercial fishery at Halovik River, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	3	5	625	41.5	2550	737
11	5	8	646	52.8	2710	657
12	6	9	691	43.0	3150	705
13	6	9	717	54.0	3742	1177
14	17	26	712	45.7	3571	689
15	11	17	709	49.3	3305	617
16	7	11	726	34.5	3336	634
17	6	9	737	41.0	3508	584
18	2	3	770	4.9	3375	35
19	2	3	668	25.5	2800	141
20	1	2	746	-	3750	-
TOTAL	66					
MEAN			706	51.7	3335	730
MEAN AGE	14.3					

Table 9 Length composition of Arctic charr taken by the commercial fishery at Halovik River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	1	1	545	1500	-
550	4	2	578	1675	65
600	11	7	639	2545	294
650	57	35	675	3026	338
700	60	37	722	3538	457
750	26	16	765	4000	410
800	2	1	805	4775	955
TOTAL	161				
MEAN			703	3320	659

Table 10. Age composition of Arctic charr taken by the commercial fishery at Paliryuak River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	2	2	546	5.7	1450	0
11	1	1	634	-	2650	-
12	16	12	613	62.1	2228	663
13	21	16	670	42.8	2762	651
14	42	32	664	39.1	2905	543
15	23	18	694	46.0	3252	664
16	11	8	701	71.0	3400	1024
17	5	4	701	44.1	3010	96
18	3	2	696	17.0	3233	493
19	1	1	722	-	3250	-
20	3	2	730	79.7	3800	1054
21	3	2	787	25.2	3567	388
TOTAL	131					
MEAN			672	58.7	2927	744
MEAN AGE	14.4					

Table 11. Length composition of Arctic charr taken by the commercial fishery at Paliryuak River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	9	4	532	1356	118
550	14	7	576	1832	368
600	37	18	630	2451	302
650	90	44	677	3019	265
700	33	16	718	3395	531
750	20	10	769	4015	605
800	1	0	804	3250	-
TOTAL	204				
MEAN			671	2921	724

Table 12. Age composition of Arctic charr taken by the commercial fishery at Paliryuak River, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	1	1	650	-	3150	-
11	5	5	681	14.2	3130	217
12	6	6	654	20.9	2825	282
13	19	19	694	49.5	3405	862
14	31	31	692	47.3	3366	701
15	20	20	704	46.4	3440	801
16	8	8	729	43.3	3738	870
17	5	5	705	32.2	3350	345
18	3	3	719	33.6	3667	633
20	1	1	810	-	4200	-
TOTAL	99					
MEAN			697	46.7	3388	726
MEAN AGE	14.2					

Table 13. Length composition of Arctic charr taken by the commercial fishery at Paliryuak River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	2	1	583	1900	0
600	22	12	629	2500	292
650	77	44	672	3042	295
700	48	27	723	3675	428
750	22	12	768	4270	725
800	5	3	808	4650	742
850	1	1	865	5000	-
TOTAL	177				
MEAN			696	3342	725

Table 14. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Lauchlan River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	4	5	621	67.1	2313	866
12	12	14	664	36.8	2929	699
13	19	22	640	62.4	2505	828
14	31	36	672	39.2	2923	616
15	12	14	664	31.6	2663	499
16	3	3	735	26.1	3417	202
17	1	1	684	-	2850	-
18	2	2	688	0.7	2975	106
19	2	2	690	26.2	2475	318
21	1	1	691	-	3250	-
TOTAL	87					
MEAN			664	47.8	2779	677
MEAN AGE	13.9					

Table 15. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Lauchlan River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	2	2	486	950	71
500	2	2	531	1300	212
550	8	7	576	1644	195
600	13	11	626	2338	284
650	63	55	677	2933	413
700	21	18	709	3314	395
750	5	4	768	3690	643
TOTAL	114				
MEAN			668	2814	679

Table 16. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Lauchlan River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	4	6	598	61.3	3063	1849
11	5	7	549	32.5	2180	662
12	11	16	588	43.7	2505	596
13	18	27	633	33.0	3078	604
14	20	30	644	58.5	3443	1005
15	3	4	682	24.7	3617	318
16	5	7	700	45.6	4580	742
17	1	1	710	-	3800	-
TOTAL	67					
MEAN			629	58.7	3172	998
MEAN AGE	13.2					

Table 17. Length composition of Arctic charr taken by the commercial fishery (upstream migratian) at Lauchlan River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	2	2	488	1200	141
500	3	3	543	1917	58
550	23	22	575	2346	279
600	32	31	624	2975	445
650	28	27	669	3611	618
700	13	13	717	4242	656
750	2	2	754	5675	247
800	1	1	840	7050	-
TOTAL	104				
MEAN			637	3192	989

Table 18. Age composition of Arctic charr taken by the commercial fishery (downstream and upstream migrations combined) at Lauchlan River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	4	3	598	61.3	3063	1849
11	9	6	581	60.4	2239	711
12	23	15	627	55.3	2726	672
13	37	24	637	49.7	2784	774
14	51	33	661	49.1	3126	823
15	15	10	667	30.6	2853	605
16	8	5	713	41.5	4144	830
17	2	1	697	18.4	3325	672
18	2	1	688	0.7	2975	106
19	2	1	690	26.2	2475	318
21	1	1	691	-	3250	-
TOTAL	154					
MEAN			648	55.4	2950	852
MEAN AGE	13.6					

Table 19. Length composition of Arctic charr taken by the commercial fishery (downstream and upstream migrations combined) at Lauchlan River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	4	2	487	1075	171
500	5	2	538	1670	356
550	31	14	576	2165	404
600	45	21	625	2791	497
650	91	42	675	3141	575
700	34	16	712	3669	679
750	7	3	764	4257	1106
800	1	0	840	7050	-
TOTAL	218				
MEAN			653	2994	860

Table 20. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Lauchlan River, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	3	3	688	8.7	2850	427
11	8	9	628	41.8	2444	641
12	23	25	652	50.9	2613	736
13	24	26	669	43.9	2844	614
14	13	14	685	43.2	3162	751
15	9	10	701	42.8	3122	921
16	7	8	700	69.8	3021	825
17	4	4	715	33.8	3350	788
18	1	1	742	-	3500	-
TOTAL	92					
MEAN			672	51.0	2866	737
MEAN AGE	13.3					

Table 21. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Lauchlan River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	8	6	579	1719	198
600	42	33	625	2286	248
650	40	31	678	2864	375
700	29	23	717	3274	506
750	9	7	766	4483	380
TOTAL	128				
MEAN			669	2809	738

Table 22. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Lauchlan River, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	1	1	605	-	2200	-
11	7	10	636	44.9	2721	788
12	12	17	650	41.6	3154	748
13	17	25	656	35.1	2991	625
14	22	32	665	63.3	3036	961
15	8	12	674	45.6	2750	501
16	2	3	650	66.5	2925	318
TOTAL	69					
MEAN			657	49.1	2965	760
MEAN AGE	13.2					

Table 23. Length composition of Arctic charr taken by the commercial fishery (upstream migration) at Lauchlan River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	7	6	583	2000	178
600	36	32	627	2563	239
650	36	32	668	3082	335
700	26	23	718	3790	705
750	8	7	767	4725	475
TOTAL	113				
MEAN			668	3129	804

Table 24. Age composition of Arctic charr taken by the commercial fishery (downstream and upstream migrations combined) at Lauchlan River, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	4	2	667	41.9	2688	477
11	15	9	632	41.9	2573	702
12	35	22	651	47.3	2799	774
13	41	25	663	40.5	2905	615
14	35	22	673	56.8	3083	879
15	17	11	688	45.0	2947	755
16	9	6	689	68.4	3000	724
17	4	2	715	33.8	3350	788
18	1	1	742	-	3500	-
TOTAL	161					
MEAN			666	50.6	2909	747
MEAN AGE	13.2					

Table 25. Length composition of Arctic charr taken by the commercial fishery (downstream and upstream migrations combined) at Lauchlan River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	15	6	580	1850	233
600	78	32	626	2413	279
650	76	32	673	2967	371
700	55	23	718	3518	656
750	17	7	766	4597	432
TOTAL	241				
MEAN			669	2959	785

Table 26. Age composition of Arctic charr taken by the commercial fishery at Ellice River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
8	1	1	530	-	1850	-
9	11	11	587	37.4	2532	477
10	15	14	594	40.8	2553	543
11	29	28	595	39.4	2653	543
12	31	30	614	38.2	2895	543
13	12	12	640	47.3	3300	871
14	3	3	687	79.6	3533	978
16	1	1	769	-	4950	-
20	1	1	676	-	3300	-
TOTAL	104					
MEAN			609	48.6	2819	673
MEAN AGE	11.4					

Table 27. Length composition of Arctic charr taken by the commercial fishery at Ellice River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	1	1	487	1400	-
500	11	8	537	1927	171
550	50	38	577	2374	260
600	46	35	622	2941	281
650	18	14	668	3542	329
700	4	3	734	4750	524
750	2	2	772	4750	283
TOTAL	132				
MEAN			609	2794	693

Table 28. Age composition of Arctic charr taken by the commercial fishery at Ellice River, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
7	2	1	478	67.9	1325	530
8	6	4	534	49.2	1917	590
9	9	6	527	27.1	2011	546
10	20	13	587	27.3	2610	517
11	39	25	608	36.0	2809	588
12	33	22	628	51.4	3098	791
13	26	17	645	62.2	3325	1061
14	10	7	680	58.0	3910	1145
15	7	5	647	67.3	3264	1129
16	1	1	705	-	3500	-
TOTAL	153					
MEAN			614	61.4	2929	916
MEAN AGE	11.5					

Table 29. Length composition of Arctic charr taken by the commercial fishery at Ellice River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
400	1	0	430	950	-
450	5	2	478	1250	184
500	15	7	528	1923	430
550	67	32	576	2390	263
600	64	31	622	3032	426
650	34	16	675	3751	484
700	17	8	720	4474	873
750	4	2	756	5038	1003
TOTAL	207				
MEAN			615	2966	924

Table 30. Age composition of Arctic charr taken by the commercial fishery at Perry River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
8	1	2	540	-	2050	-
9	2	4	540	34.6	1950	354
10	11	24	583	31.4	2491	419
11	15	33	586	27.7	2573	425
12	6	13	637	45.1	3317	807
13	9	20	623	51.5	3094	823
14	1	2	648	-	3500	-
17	1	2	787	-	4550	-
TOTAL	46					
MEAN			602	51.7	2777	712
MEAN AGE	11.3					

Table 31. Length composition of Arctic charr taken by the commercial fishery at Perry River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	5	8	539	1990	171
550	28	46	574	2357	222
600	19	31	628	3150	345
650	6	10	677	3800	432
700	2	3	704	4550	354
750	1	2	787	4550	-
TOTAL	61				
MEAN			606	2824	718

Table 32. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Jayco River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	4	4	510	56.4	1150	358
11	6	6	541	64.9	1517	690
12	9	9	569	86.9	1600	536
13	14	14	623	63.0	2250	627
14	14	14	612	72.1	2275	843
15	5	5	652	59.7	2290	426
16	15	15	671	71.7	2847	796
17	9	9	683	61.4	2900	601
18	7	7	671	59.5	2824	341
19	4	4	637	45.7	2300	587
20	8	8	664	55.6	2644	625
21	1	1	648	-	3000	-
22	1	1	715	-	3000	-
23	1	1	725	-	3850	-
TOTAL	98					
MEAN			631	79.3	2364	808
MEAN AGE	15.2					

Table 33. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Jayco River,1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
400	3	2	447	717	29
450	5	3	480	980	97
500	18	12	527	1356	281
550	23	15	570	1730	293
600	31	21	626	2227	337
650	37	25	677	2935	382
700	31	21	718	3168	458
750	1	1	755	3600	-
800	2	1	803	4125	1237
TOTAL	151				
MEAN			632	2377	838

Table 34. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Jayco River, 1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	2	2	580	56.6	2200	636
12	6	7	604	55.5	2775	808
13	14	16	635	40.1	2954	637
14	15	17	643	34.4	3087	591
15	22	24	641	39.4	3000	537
16	11	12	673	42.0	3400	605
17	6	7	648	17.9	2925	268
18	9	10	670	39.9	3211	497
19	1	1	658	-	3400	-
20	2	2	685	63.6	3200	566
21	1	1	612	-	2750	-
25	1	1	710	-	3900	-
TOTAL	90					
MEAN			645	43.5	3056	590
MEAN AGE	15.1					

Table 35. Length composition of Arctic charr taken by the commercial fishery (upstream migration) at Jayco River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	6	3	536	1758	297
550	19	10	586	2274	230
600	73	40	626	2791	283
650	58	32	669	3321	383
700	24	13	716	3988	351
750	1	1	760	4250	-
TOTAL	181				
MEAN			645	3039	630

Table 36. Age composition of Arctic charr taken by the commercial fishery (downstream and upstream migrations combined) at Jayco River,1981.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	4	2	510	56.4	1150	358
11	8	4	551	61.5	1688	706
12	15	8	583	75.7	2070	867
13	28	15	629	52.2	2602	716
14	29	15	628	57.1	2695	822
15	27	14	643	42.7	2869	583
16	26	14	672	59.9	3081	761
17	15	8	669	50.9	2910	482
18	16	9	670	47.6	3042	467
19	5	3	641	40.6	2520	708
20	10	5	668	54.2	2755	628
21	2	1	630	25.5	2875	177
22	1	1	715	-	3000	-
23	1	1	725	-	3850	-
25	1	1	710	-	3900	-
TOTAL	188					
MEAN			638	64.9	2695	790
MEAN AGE	15.2					

Table 37. Length composition of Arctic charr taken by the commercial fishery (downstream and upstream migrations combined) at Jayco River, 1981.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
400	3	1	447	717	29
450	5	2	480	980	97
500	24	7	529	1456	330
550	42	13	577	1976	380
600	104	31	626	2623	395
650	95	29	672	3171	425
700	55	17	717	3526	580
750	2	1	758	3925	460
800	2	1	803	4125	1237
TOTAL	332				
MEAN			639	2738	802

Table 38. Age composition of Arctic charr taken by the commercial fishery at Jayco River, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	3	3	615	37.6	2417	416
12	12	12	624	43.9	2538	602
13	11	11	656	38.6	2909	576
14	16	16	669	39.7	3188	677
15	18	17	668	52.9	3086	639
16	18	17	694	37.2	3397	744
17	7	7	705	27.1	3721	472
18	7	7	712	14.9	3464	708
19	4	4	714	41.9	3388	1112
20	6	6	700	52.6	3242	830
23	1	1	665	-	2800	-
TOTAL	103					
MEAN			674	48.2	3141	725
MEAN AGE	15.2					

Table 39. Length composition of Arctic charr taken by the commercial fishery at Jayco River, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	13	8	583	2096	164
600	31	20	626	2511	274
650	59	38	675	3154	356
700	44	28	720	3694	550
750	9	6	758	4161	646
TOTAL	156				
MEAN			675	3149	698

Table 40. Age composition of Arctic charr taken by the commercial fishery at Rankin Inlet, 1982.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
6	1	1	385	-	600	-
8	5	5	554	57.2	1610	456
9	7	7	578	38.1	1914	534
10	29	30	631	35.5	2459	434
11	24	24	649	48.6	2642	596
12	17	17	663	53.9	2794	722
13	11	11	667	44.6	2745	520
14	3	3	684	16.6	2767	208
15	1	1	758	-	3500	-
TOTAL	98					
MEAN			638	59.9	2513	650
MEAN AGE	10.9					

Table 41. Length composition of Arctic charr taken by the commercial fishery at Rankin Inlet, 1982.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
350	1	1	385	600	-
450	1	1	496	1100	-
500	5	4	530	1380	130
550	16	13	584	2069	372
600	48	39	627	2318	247
650	35	29	671	2793	317
700	12	10	720	3342	417
750	3	2	768	3767	551
800	1	1	808	4900	-
TOTAL	122				
MEAN			641	2516	639

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